

***Remarks***

Applicant has shown the same amendments as were made in the September 30, 2004 Amendment and Reply, but have added specific reference to claim 27 in their remarks, which specific reference was inadvertently not made in the remarks in the September 30, 2004 Amendment and Reply. Applicant notes the patentable features of claim 27, which are similar to the patentable features of claim 11, were discussed in the September 30, 2004 Amendment and Reply.

Claim 11 is sought to be amended. Upon entry of the foregoing amendment, claims 1-28 are pending in the application, with 1, 8, 11, and 27 being the independent claims. No new matter has been entered by any amendments.

Reconsideration of this Application is respectfully requested.

The Examiner is thanked for the indication of allowable subject matter in claims 15, 19, 20, and 26 and that claims 1-10 were allowed over the cited references.

Based on the above amendment and following remarks, Applicant respectfully requests that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

***Rejections under 35 U.S.C. § 102(e) and 103(a)***

Claims 11-14, 16-18, 25, and 27 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,814,425 to Kataoka et al. (“Kataoka”). Claims 21 and 22 were rejected under 35 U.S.C. § 103(a) (“103”) as being unpatentable over Kataoka in view of an article to Kirk et al. (“Kirk”). Claims 23 and 28 were rejected under 103 as being unpatentable over Kataoka in view of U.S. Patent No. 5,923,423 to Sawartari et al. (“Sawartari”). Claim 24 was rejected under 103 as being unpatentable over Kataoka in view of U.S. Patent No. 4,732,483 to Biegen (“Biegen”). Applicant traverses these rejections.

Claim 11 recites at least illuminating periodic patterns in an object plane of an object space of the optical system, the object plane extending over a range of depths through the object space. Kataoka does not teach of this feature.

Claim 27 recites at least illumination means for projecting an image of a reticle having a plurality of periodic pattern features thereon within a volume of image space ... means for detecting the image at different locations comprising different depths of focus within the volume of image space.

Kataoka teaches an object plane being parallel or substantially parallel to an image plane throughout the specification and figures. As noted by the Examiner, at col. 7, lines 58-62 Kataoka teaches that a curvature and tilt of an image plane of a projection lens as passed through the resist process can be detected. However, Kataoka does not teach or suggest illuminating periodic patterns in an object plane of an object space of the optical system, the object plane extending over a range of depths through the object space, as recited in claim 11, or means for detecting the image at different locations comprising different depths of focus within the volume of image space, as recited in claim 27. Support for this feature is found in a paragraph spanning pages 9-10 in the instant specification discussing Figure 2, for example. None of the other applied patents or the article remedy the deficiency in Kataoka. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw this rejection. Also, at least based on their dependency to claims 11 and 27, respectfully, claims 12-26 and 28 should also be found allowable over the applied patents and article.

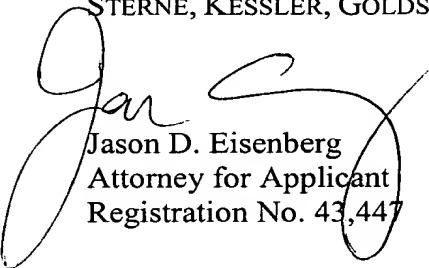
### ***Conclusion***

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

  
Jason D. Eisenberg  
Attorney for Applicant  
Registration No. 43,447

Date: 2/21/05  
1100 New York Avenue, N.W.  
Washington, D.C. 20005-3934  
(202) 371-2600  
SKGF\_DC1: 306937.1